

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
13 October 2005 (13.10.2005)

PCT

(10) International Publication Number  
**WO 2005/095527 A1**

(51) International Patent Classification<sup>7</sup>: **C09D 4/00**,  
G02B 1/00

[JP/JP]; 5-6-10, Tsukiji Chuo-ku, Tokyo 104-8410 (JP).  
**KOMIYA, Zen** [JP/JP]; 5-6-10, Tsukiji Chuo-ku, Tokyo  
104-8410 (JP).

(21) International Application Number:  
PCT/NL2005/000195

(74) Agent: **DORRESTIJN, A.**; DSM Intellectual Property,  
P.O. Box 9, NL-6160 MA Geleen (NL).

(22) International Filing Date: 15 March 2005 (15.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2004/97737 30 March 2004 (30.03.2004) JP

(81) Designated States (*unless otherwise indicated, for every  
kind of national protection available*): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG,  
KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,  
MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,  
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(71) Applicants (*for all designated States except US*): **DSM  
IP ASSETS B.V.** [NL/NL]; Het Overloon 1, NL-6411 TE  
Heerlen (NL). **JSR CORPORATION** [JP/JP]; 5-6-10,  
Tsukiji Chuo-ku, Tokyo 104-8410 (JP). **JAPAN FINE  
COATINGS CO., LTD.** [JP/JP]; 57-1, Sawabe, Ni-  
ihari-mura, Niihari-gun, Ibaraki 300-4104 (JP).

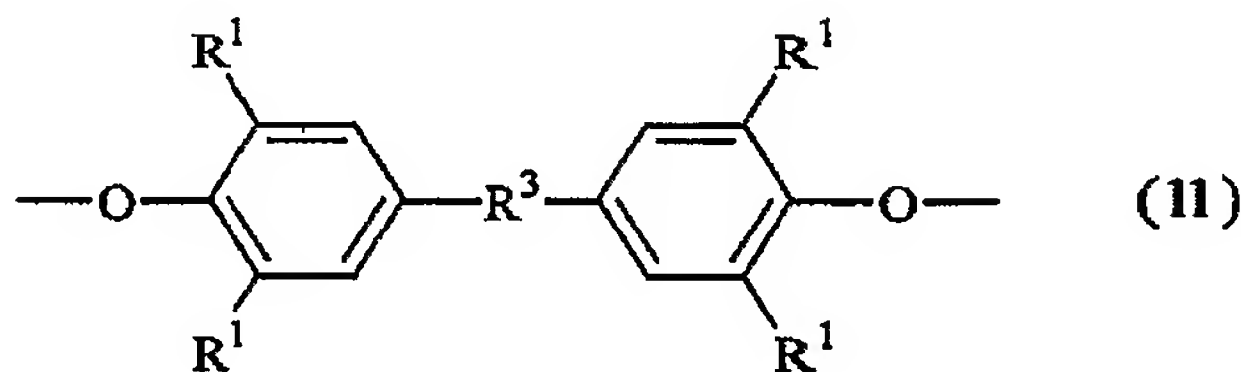
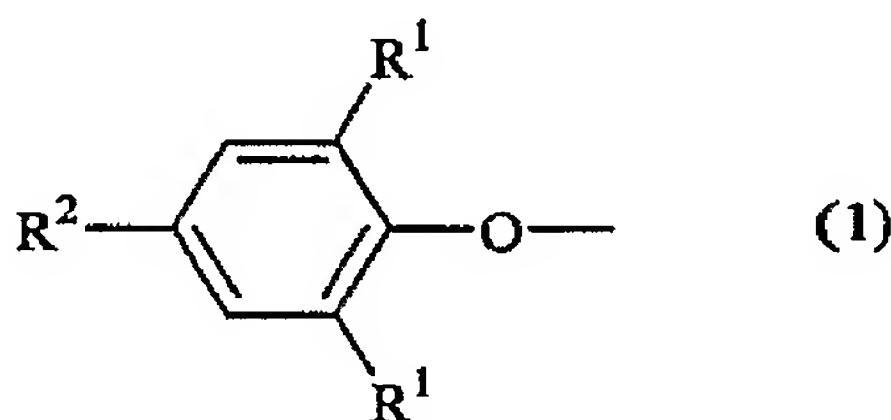
(84) Designated States (*unless otherwise indicated, for every  
kind of regional protection available*): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **FUTAMI, Satoshi**

[Continued on next page]

(54) Title: PHOTOCURABLE COMPOSITION AND OPTICAL PART



(57) Abstract: Subject : To provide a photocurable composition capable of producing a cured product excelling in heat resistance, showing only a small amount of deformation, and producing cured products particularly useful as optical parts. Means for the Solution : A photocurable composition comprising the following components (A)-(D): (A) at least one of the (meth)acrylates having the structures shown by the formulas (1) and (2) (excluding the following component (C)), Chemical Formula (1), Chemical Formula (2) wherein R<sup>1</sup> represents a hydrogen atom or a halogen atom excluding a fluorine atom, R<sup>2</sup> is a hydrogen atom, a halogen atom excluding a fluorine atom, Ph-C(CH<sub>3</sub>)<sub>2</sub>-, Ph-, or an alkyl group having 1-20 carbon atoms, and R<sup>3</sup> represents -CH<sub>2</sub>-, -S-, or -C(CH<sub>3</sub>)<sub>2</sub>-, (B) a (meth)acrylate having three or more functional groups, (C) a monofunctional monomer of which the homopolymer has a Tg of 150°C or more, and (D) a radical photoinitiator, wherein 5-50 wt% of the total acrylic components in the composition is a methacrylate compound and the component (C) is contained in an amount of 4-40 wt%.

WO 2005/095527 A1



SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

— *with international search report*